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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,225	03/16/2004	Zeying Ma	200309561-1	5644
22879	7590	09/15/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			FERGUSON, MARISSA L	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/803,225	Applicant(s) MA ET AL.	
	Examiner Marissa L. Ferguson	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Regarding claim 22, Yue et al. teaches wherein the pigment colorant is present in the inkjet ink at from 0.5 % to 10% (Column 4, Lines 14-24).

Regarding claims 24 and 29, Yue et al. teaches the method and apparatus claimed with the exception of a step of applying heat to the printed image to contribute to the physical property of the image being altered and a physical property is smoothness, wherein upon applying pressure, the printed image is modified from having a textured profile to a smoother profile. Tamagawa et al. provides the calendaring treatment in order to alter the appearance of a substrate by providing a smooth surface (Paragraph 0011). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to smoothness as a physical attribute as taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to form an image having superior image quality and gloss.

3. Claims 2,10-13,18 and 26 are rejected under 35 U.S.C. 103(x) as being unpatentable over Yue et al. (US Patent 6,461,418) in view of Tamagawa et al. (US Publication 200310198885) as applied to claims 1 and 17 above, further in view of Kitamura et al. (US Patent 6,498,222)

Regarding claims 2 and 18, Yue et al. and Tamagawa et al. both teach the method and apparatus claimed with the exception of a fixer composition including a crashing agent that is reactive with a component of the inkjet ink, a fixer composition being configured to be overprinted or under printed on the offset media with respect to the inkjet ink. Kitamura et al. teaches an inkjet system with a crashing agent component

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(Column 13, Lines 35-55, Column 14, Lines 14-60) configured to be overprinted or under printed on a substrate. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include a crash agent as taught by Kitamura et al., since Kitamura et al. teaches it is advantageous to provide a fast drying image.

Regarding claims 10-13 and 26, Yue et al. and Tamagawa et al. both teach the method and apparatus claimed with the exception of a crashing agent selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids, and combinations thereof, a crashing agent that is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylarnines, polyacrylamines, polyquaternaryamines, cationic polyuretanenes, aminecelluloses, polysacchride amines and combinations thereof, a crashing agent that is a multivalent metal ion or ionic group is provided by a member selected from the group consisting of multivalent metal nitrates; EDTA salts, phosphonium halide salts, organic acids, chloride salts, and combinations thereof and a crashing agent that is an acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid,

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prbpionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, pchlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m--nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, 5 adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, phydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid,, benzenesulfonic acid, methylbenzenesulfonic acid, ethyl benzenesulfonic acid, dodecylbenzenesulfonic acid, s-sulfosalicylic acid, l-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids 10 such as glycine, alanine, valine, G-am inobutyric acid, a-aminobutryic acid, aalanine, taurine, serine, a-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof.

Kitamura et al. teaches a crashing agent consisting of polymeric ionic crashing agent that is a polyacrylamide (Column 14, Lines 55-57) and an acidic crashing agent selected from sulfuric acid, acetic acid, glycolic acid, hydrochloric acid and propinic acid (Column 14, Lines 20-28). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include a crash agent selected from a group of acids and cationichonic polymers as taught by Kitamura et al., since Kitamura et al. teaches it is advantageous to improve durability and water fastness of an inkjet ink image on a printed substrate.

4. Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yue et al. (US Patent 6,461,418) in view of Tamagawa et al. (US Publication 2003!0198885) and Kitamura et al. (US Patent 6,498,222) as applied to claims 2 and 18 above, further in view of Iwasaki et al. (US Patent 6,800,588).

Yue et al., Tamagawa et al. and Kitamura et al. all teach the claimed method and invention with the exception of a crashing agent present in a composition at from 0.1 wt% to 1 Owt%. Iwasaki et al. teaches an acid surfactant contained in an inkjet ink with a weight composition of 0.5 wt% to 10% by weight and 1 to 5 wt% by layer (Column 4, Lines 59-67 and Column 5, Lines 1-4). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include a crash agent with a weight 0.5-10% as taught by Iwasaki et al., since Iwasaki et al. teaches it is advantageous to improve the resistance of inkjet ink.

5. Claims 4,5,20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yue et al. (US Patent 6;461,418) in view of Tamagawa (US Publication 200310198885) as applied to claims 1 and 17 above, and further in view of Ishikawa et al. (US Publication 200210'175983).

Yue et al. and Tamagawa et al. both teach the method and invention claimed including the claimed weight as discussed in claim 6 above, however the references do not explicitly disclose latex particulates dispersed in the inkjet ink. Ishikawa et al. teaches latex particulate dispersion in inkjet inks (Paragraph 0006). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to

modify the invention taught by Yue et al. to include dispersing particulates in an inkjet ink as taught by Ishikawa et al., since Ishikawa et al. teaches it is advantageous to improve water resistance, light fastness and rub resistance of inkjet images.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yue et al. (US Patent 6;461,418) in view of Tamagawa (US Publication 200310198885) as applied to claims 1 and 17 above, and further in view Deguchi et al. (JP 02026747).

Yue et al. and Tamagawa et al. both teach the method and invention claimed except for wherein the physical property is flow, wherein upon applying pressure, the printed image is temporarily modified from a more solid configuration to a more liquid configuration. Deguchi et al. teaches a hot melt type ink jet printer that melts the printing ink on a paper and softens the ink due to pressure applied by a device (Purpose and Constitution). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include a printing image that is temporarily modified due to pressure as taught by Deguchi et al., since Deguchi et al. teaches that it is advantageous to add heat in order to make the printed image into a more liquid configuration.

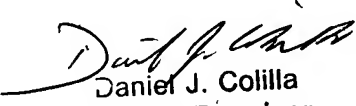
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L. Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson
Examiner
Art Unit 2854


Daniel J. Colilla
Primary Examiner
Art Unit 2854

DETAILED ACTION

Drawings

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-9, 14-17, 22-25 and 27- 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Yue et al. (US Patent 6;461,418) in view of Tamagawa et al. (US Publication 200310198885).

Regarding claims 1, 16 and 17, Yue et al. teaches the invention and method claimed comprising offset media and an inkjet ink including a pigment colorant, said inkjet ink being configured to be ink jetted onto the offset media (Abstract, Column 3, Lines 11-13, Lines 53-56, Column 4, Lines 14-16, Lines 26-28). However, he does not explicitly disclose a calendaring device comprising a pair of rollers configured for applying pressure to offset media once the inkjet ink is ink-jetted thereon. Tamagawa et al. teaches an offset technique with rollers; (3-6) for calendaring a media with inkjet ink to be printed thereon the surface of the paper (Paragraphs 0005, 0014 and 0111). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include a calendared offset paper as

taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to improve image quality and printability.

Regarding claims 6,14,15,27 and 28, Yue et al. teaches the invention and method claimed with the exception of latex particulates present in the overcoat composition at from 0.1 wt% to 15% wt and being predominantly from 20 nm-500nm and 10,000 Mw to 2,000,000 in size. Tamagawa et al. does not teach the exact /specific claimed molecular weight, however he does at least teach core/shell latex particles with an average molecular weight of 30,000 to 500,000 ($M_n(c)$) of the core and 4,000 to 30,000 [$M_n(s)$] of the shell and particle size of 0.2 μm (Page 5, Paragraphs 0079-0081). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include the claimed range as taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to provide a recording material with excellent surface smoothness and water resistant qualities.

Regarding claims 7-9,23 and 25, Yue et al. teaches the invention and method claimed with the exception of mechanical pressure applied at from 500 psi to 3000 psi and applying a heat from 20° to 90° C. Tamagawa et al. teaches a calendaring treatment using rollers (elements 3-6) that applies a pressure of 100k N/m to 600k N/m (Paragraph 0118) and applies a varied amount of heat (Table 3, Page 3). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Yue et al. to include calendaring pressure and temperature as taught by Tamagawa et al., since Tamagawa et al. teaches it is advantageous to efficiently provide and increase the surface smoothness of the substrate.